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This study investigated the degree to which mothers of 4-year-old children placed specific behavior of their children in a meaningful context and whether such degree was a function of the socioeconomic status (SES) of the mother and/or of the particular situation involved. The subjects were 137 mother-child pairs of Negroes, who ranged in SES from middle class to lower-lower class. The mother was observed during a structured interaction (with her child), in which the mother attempted to teach her child a block sorting task. For purposes of data collection, the task was divided into sections or "situations." It was found that the degree of informational specificity in the mothers' communications varied both with social status and with the sections of the task. The middle class mothers generally scored highest on specificity. Sharp differences in the amount of meaningful activity between mother and child were found for (1) stimulating or enriching activity, (2) complex or abstract activity, and (3) teaching desired behavior, rather than just eliminating undesired behavior. The data favored the higher SES mothers. (WD)

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MOTHERS AS TEACHERS OF THEIR OWN PRESCHOOL CHILDREN: THE INFLUENCE OF SOCIO-ECONOMIC STATUS AND TASK STRUCTURE ON TEACHING SPECIFICITY

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A B S T R A C T

Informational specificity in the teaching of mothers interacting with their own preschool children was studied in relation to SES and aspects of situational press. Specificity in the form of verbal labels and attention-focusing techniques was found to vary both with SES and with differences among task components in their tendency to elicit specificity from the mothers.

The data suggest that SES differences in maternal teaching are not describable in terms of two contrasting "styles," but instead represent variation from limited, primarily reactive teaching to more diversified, proactive teaching. In general, SES differences in parental behavior should be greatest in activities initiated and structured by parents and least in reactive situations in which the parent is responding to overt action by his child.

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Until recently, studies of parental behavior and socialization methods have been concerned primarily with studying the development of social and personological variables in children, relating them to parental differences on dimensions such as permissiveness-strictness and love-hostility (Becker, 1964). However, with the re-emergence of Piaget (Flavell, 1963), with renewed interest in the effects of environment on the development of intelligence (Hunt, 1961), and with general concern over the national problem of cultural disadvantage, socialization research has widened in scope and begun to focus on cognitive variables, both in parents and in children. The discovery of home environment factors, especially parental behavior variables, which affect the development of cognitive abilities and/or educability in children has become a major focus of interest.

Phrased somewhat differently, this research focus may be seen as a search for some of the mechanisms which may underlie (and presumably explain) cultural disadvantage. Socio-economic variables such as occupation, income, and education are associated with and in a statistical sense predict cultural disadvantage, but they do not identify the mechanisms or the cause-and-effect relationships linking home environment variables to cognitive development in children. Investigators concerned with studying such variables have hypothesized that factors like the amount and variety of stimulation in the home (Hunt, 1961), characteristics of the parents' language (Bernstein, 1960), and parental patterns of reinforcement (Gray and Klaus, 1965) or feedback (John and Goldstein, 1964) may affect cognitive development in children. These variables, of course, are not mutually exclusive and they do tend to correlate with one another.

Hess and Shipman and their associates at Chicago have attacked this question directly in the Study of the Cognitive Environments of Urban Pre-school Children. Their research involving 163 pairs of subjects (urban Negro mothers and their four-year-old children) divided into four social status groups, studied a wide range of variables including language styles, cognitive styles, problem solving behavior, socialization practices, attitudes toward school and education, control strategies used in making demands upon the child and rationalizing the demands to him, and teaching behavior in deliberate instruction situations. Differences among mothers from the various social status groups were found in all of these

areas, and maternal scores were regularly associated with child measures where parallel group difference patterns were observed.

In summarizing their findings, Hess and Shipman (1965) have described the behavioral deficit among the culturally disadvantaged as one of lack of meaning. By this they mean that a particular act seems not to be sufficiently related to preceding or subsequent acts and lacks meaning in that it "is not sufficiently related to the context in which it occurs, to the motivations of the participant, or to the goals of the task." The present study investigated this hypothesis by studying the methods and relative success with which mothers attached meaning to their own and their children's behavior in a structured mother-child interaction task. The Hess-Shipman hypothesis was adopted, but attention was also focused on task structure and other variables of situational press which might affect the meaning attached to specific responses. The guiding hypothesis of this research, then, was that the degree to which mothers place specific behavior in a meaningful context can be described as a multiple function of the socio-economic status of the subjects and the degree to which factors of situational press tend to elicit meaning as a reactive response.

Procedures

Subjects

The subjects were 137 of the 163 mother-child pairs which formed the population for the Study of the Cognitive Environments of Urban Preschool Children (Hess and Shipman, 1965).[1] All subjects were from urban Negro families selected according to the education of the parents, the father's occupation and the ages of the children (44-52 months at entrance into the study). Four social status

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[1]Twenty-six of the original 163 subjects were eliminated because they did not meet selection criteria required for another aspect of the study (not included in the present report). A few were dropped because of incomplete data, but the majority were dropped for other reasons. In general, the dropped subjects had disorganized interactions involving friction between mother and child and little sustained teaching. As far as can be determined, exclusion of these subjects did not bias the data in favor of the hypotheses. In fact, the opposite seems to be the case: when data from these subjects are included, the group differences and interrelationships obtained are accentuated.

groups were represented: 1) Group A included upper-middle class intact families in which the parents had college educations (not necessarily degrees) and the fathers held professional or managerial positions. 2) Group B included upper-lower class intact families in which the parents had a high school education and the fathers worked at skilled blue-collar occupations. 3) Group C included lower-lower class intact families in which neither parent had more than a tenth grade education and the fathers worked at semi-skilled or unskilled occupations. 4) Group D included lower-lower class, father-absent families in which the mothers had no more than a tenth grade education and the family was supported through public assistance (aid to dependent children).

At the time of the study, no mothers were working and all were the chief caretakers for the children involved. Age, sex, education, and intelligence data for the subjects in each of the four groups are summarized in Table 1.

Tasks

As part of the larger Hess-Shipman study, each mother-child pair was observed during structured interaction in which the mother attempted to teach her child a task. One of the tasks involved learning to sort blocks according to specified criteria. The blocks differed on four attributes--color (red, yellow, blue, green), shape (circular vs. rectangular cross-section), height (tall vs. short), and mark ("X" vs. "O"). The mothers were to teach their children to sort the blocks into four groups according to height and mark (tall blocks with "X," tall blocks with "O," short blocks with "X," and short blocks with "O"), and to explain the sorting principle. Data from this task were chosen for the present research because the meaningfulness of the task resides in the grouping principle being applied and not in the sorting operations themselves, so that the child is dependent on his mother to provide a context of meaning within which he is to understand the task. Depending on the mother's teaching, the child may come to see the task as anything from an arbitrarily imposed chore to be learned and performed in rote fashion to a stimulating, enjoyable, mildly challenging mental exercise or game.

Other important qualities of the task included the following:

1) It was unfamiliar to all subjects, so that none had prior specific practice on it.

2) The material to be learned was specific and circumscribed, facilitating measurement of informational specificity in maternal teaching and child learning.

3) The children's responses could be immediately recognized as either correct or incorrect.

4) The difficulty level was such that comparable data could be obtained for the great majority of the subjects, despite the wide range of abilities and backgrounds represented.

The mothers were first taught the task while the child was not present, using an elicitation approach which allowed them to supply their own labels for the relevant stimulus attributes ("tall," "big," "same height," etc.). Once the mother grasped the essentials of the task, teaching was continued to an overlearning criterion of three consecutive errorless trials, each involving both placement of blocks and verbalization of the sorting principle. This redundancy, combined with the use of the elicitation method, served the dual functions of reducing the possibility that mothers would be come confused later when teaching their children, while avoiding the use of a well-organized lecture-demonstration mode of presentation which the mothers could then simply imitate later. As a result of these procedures, each mother learned the same task but each encoded it in her own individual way and had to rely primarily upon her own individual style in teaching it to her child.

Following presentation of the task to the mother, she was asked to teach it to the child. She was told to take as much time as she wanted in doing this and to teach him in any way that she liked, as long as he learned to put the blocks into groups correctly and to explain the reasons for the groupings. The mother was to be alone with her child during this time, and was to call the testor back to the room to examine the child when she thought he had learned the task. At this point, the child was brought into the room and the testor left, staying outside until summoned back by the mother.

For each interaction, the verbalizations of the mother and child were recorded on one sound tape while an observer stationed behind a one-way window recorded a running description of their nonverbal behavior on another tape. Every 30 seconds a "beep" signal was sounded on both tapes through an automatic timing mechanism. Transcriptions of these two tapes, appropriately coordinated with the help of the time divisions, formed the raw data to be analyzed. The mothers were aware of the observation and recording procedures but had been asked not to communicate this to their children.

Although observors had been instructed to report any behavior that seemed relevant or noteworthy, behavior falling in the following categories received primary and consistent priority:

1) The spatial location of all task materials.

2) Pointing or gesturing toward the task materials and movement of the task materials by either subject (mother or child).

3) Task-specific responses (correct or incorrect; if incorrect, including the precise nature of the error).

4) Facial expressions, gestures, and other forms of non-verbal communication.

5) The attention of the child to his mother (including specific description of his behavior when he "tuned out" from the task).

6) All physical contact between the subjects (restraint, manual guidance, affectionate touches, etc.).

7) The quality of the child's responses (apparently purposive and systematic vs. random guessing; involved vs. uninvolved).

Although this method is cumbersome and expensive, it has the vital advantage of allowing preservation of the data in raw form, a highly desirable and perhaps necessary condition for the type of coding involved. Initially two observers were used for each interaction, but analysis of their protocols showed that only one was necessary since agreement on vital information (that which affected coding decisions) was close to 100%, with differences being omissions and not contradictions.

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For the coding analysis, the typescripts of each case (subjects' verbalizations and observer's narrative description) were coordinated in time sequence and treated as a single body of raw data. The analytic procedures were designed to insure that decisions would be made at the coding level (presence or absence of specific behavior) rather than at the level of ratings or quantitative judgments. Scores were then derived from the basic coding through arithmetic procedures. Each score is assumed to measure the degree of meaning communicated by the mother (operationally defined here as degree of specificity in task-relevant information communicated to the child), but the scores differ from one another in the degree or type of associated situational press assumed to be operating. Two aspects of the mothers' communication of meaning were coded: verbalization of specific labels describing the relevant attributes of the blocks, and focusing behavior intented to help the child focus his attention on the appropriate attributes of the blocks.

Verbalization of labels was considered present whenever the mother supplied an appropriate specific label referring to the attributes ("X," "O," "tall," "short," "same height," "same mark," or any of their synonyms). Verbalization of labels was considered absent when the mother made no reference to the blocks or referred to them in language which did not include mention of the attributes ("this one," "that one," "the block over there," "the right one," "the block that belongs there," etc.). Thus, the instruction "find the tall block with 'X' " would be coded for presence of verbalization of both of the relevant labels, while the instruction "find the block that goes here" would be coded for absence of reference to either label. It should be noted that both of the example instructions could refer to the same desired response on the part of the child. The first, however, because of the specific language involved, places the response in a meaningful context by operationally describing the process the child is expected to use; the second lacks this specific delineation of response process.

Focusing was considered present if the mother tried to go beyond verbalization of labels by drawing the child's attention to the relevant stimulus attributes or by making those attributes more salient in his perceptual field.

Mothers could focus their children's attention on the marks, for instance, by pointing to them or by asking the child to look at the top of the block. Similarly, they could focus on height by placing their hand across the tops of blocks of equal height or by making hand motions in the air to indicate height. Any of these methods would tend to focus the child's attention on the relevant aspects of the block in question. An even more effective method of helping the child to associate the verbal label with its appropriate physical referent on the blocks was to juxtapose in close physical proximity blocks which differed on one of the dimensions and then to contrast them by pointing back and forth between the short and the tall block or between the "X" and the "O."

Application of the preceding distinctions allows identification of several levels of specificity in the information conveyed by mothers in attempting to help their children process blocks. In the verbal sphere, they may supply both of the relevant labels for a given block, verbalize only one of those labels, or fail to provide any relevant specific label. In the realm of focusing behavior, mothers can contrast by pointing back and forth between adjacent blocks, indicate positive instances of a single concept on an appropriate block or group, or fail to make any attempt to focus the child's attention to particular attributes of the blocks. The coding analysis was geared to measure these aspects of maternal teaching, and the scores derived from it (except for one time measure) express the degree to which the mother's presentation was saturated with verbalization of specific labels and attempts to focus the child's attention. Rather than sum up instances of such behavior and weight them by time or number of trials in order to obtain a single saturation measure, however, ten separate measures were derived from the raw coding by combining codes from various subparts of the task. These subparts were identified for analysis on the basis of previous hypotheses concerning type and degree of environmental press.

Maternal communication of meaning (or in terms of its operational expression, maternal communication of relevant information) is assumed to function like a dispositional variable (Ryle, 1949), so that unless unusual accelatory or inhibitory forces are present, members of a population would

be expected to remain relatively stable in their performance relative to one another. Because of this stability in relative positions, consistent individual and group differences would be expected. Such stability may not appear in absolute level of performance, however, which may fluctuate from situation to situation. The situational factors affecting level of performance are referred to in this research as "situational press." In coding maternal teaching, three sources of situational press were considered: the stimulus attributes of the blocks (height and mark), the demands of different subparts of the task (initial orientation, pre-response instructions, and post-response feedback), and the performance of the child (successful or unsuccessful).

It was expected that specificity of information would be higher when mothers were talking about the marks than the heights of the blocks, since the marks were concrete entities which could be indicated directly by pointing, while similarities and differences in height could not be communicated so simply and directly. With regard to the subparts of the task, it was expected that the greatest press for specificity would occur in post-response feedback as opposed to pre-response instructions or initial orientation. Finally, within the post-response feedback situation, it was expected that greater press for specificity would occur when the child had made mistakes than when he had made correct responses, so that greater specificity was expected in the mothers' correction of errors than in their reactions to correct responses.

In teaching the task, most mothers began with a period of orientation in which they explained and/or demonstrated the task to the child. During this time the child was expected to listen and watch, but not to make grouping responses. Following orientation, the rest of the interaction then ordinarily consisted of rounds of responses in which the child attempted to place the blocks and the mother corrected and/or questioned him. For purposes of analysis, the task was divided into subparts which parallel this naturally occurring structure. Maternal behavior was separately tabulated according to whether it occurred during <u>orientation</u> (defined as everything which occurred before the first instruction to the child to place a block), <u>pre-response</u>

instructions (directions given to the child before each response), or post-response feedback (confirmation or correction following the child's placement response). Separate tabulation guided by the preceding considerations regarding informational specificity and environmental press yielded the following eleven measures:

A) Orientation period

1. Presentation of the concept of "mark." Presentation of the "mark" concept was coded on a 4-point scale, with the mother receiving credit for the highest degree of specificity she attained at any time during the orientation period. A mother was scored 0 if she did not refer to the marks at all before the first placement response; "1" if she verbalized the label for mark but did not focus or contrast specific examples; "2" if she pointed to the marks, held up the ends of the blocks to the child, or instructed him to look on top of the blocks while she verbalized the labels; "3" if she grouped the blocks by mark or pointed back and forth between contrasting marks while verbalizing the different labels.

2. Presentation of the concept of "height." Maternal presentation of the "height" concept was coded on a parallel 4-point scale, and again the mothers were credited with the highest scale point reached. A mother was coded "0" if she did not refer to height at all during the orientation period; "1" if she verbalized labels for "height" but did not contrast or focus; "2" if while verbalizing labels she placed her hand across the tops of blocks of equal height or made hand motions in the air but did not specifically group by height or contrast adjacent blocks; "3" if she grouped the blocks by height or pointed back and forth between adjacent blocks of contrasting height while verbalizing appropriate labels.

3. Orientation time. The time elapsing between the beginning of the task and the point at which the mother first asked the child to place a block was recorded for each pair of subjects. The mother was scored "0" if this period lasted no more than 30 seconds; "1" if the period lasted 31 - 90 seconds; "2" if it lasted between 91 and 150 seconds; and "3" if the orientation period lasted more than 150 seconds (these intervals were substituted for the raw scores because the distribution was seriously skewed to the right by a few subjects).

B) Pre-response instructions.

1. Verbalization of both labels. Mothers were coded for specification of labels in the instructions they gave their children in telling them to place blocks in groups. Each instruction was coded for verbalization of both labels if the mother verbalized labels for both height and mark ("get the tall block with the 'X' and put it where it goes"). The frequency of such instructions was converted into a percentage of the total number of grouping instructions given by the mother, so that each mother's score represents the rate with which she verbalized both of the relevant labels when she was giving placement instructions to the child. The scores to be described below use a similar conversion of raw coding to percentages, so that mothers can be compared for the frequencies with which they meet behavioral criteria when performing specified subparts of the teaching task, even though the mothers differed in the time and number of trials devoted to each of the various subparts.

2. Verbalization of any label. This score represents the frequency with which mothers verbalized any label when giving pre-response instructions to the children, either giving both labels as above or giving only one of the relevant labels ("find the block that goes with these tall ones"). On trials where mothers failed to verbalize labels, they either watched silently while the child placed blocks or gave a verbal direction that did not specify labels ("put that one where it goes;" "find the one that goes here").

3. Pre-response focusing. This score represents the frequency with which mothers supplemented their verbal instructions with focusing or contrasting behavior (levels "2" and "3" on the orientation period scales above). Credit was given if the mother focused on either attribute in giving her pre-response instruction.

4. Specificity in global instructions. In addition to directions concerning the placement of single blocks (to which the three preceding measures refer), the mothers also tended to give more global instructions at the beginning of each round of placements. These instructions referred to the series of placements as a whole, rather than to the placement of a particular

block in a particular group. Such statements sometimes included verbalization of labels ("put the blocks that are the same height and the same mark together"), and sometimes did not ("put the blocks together the way they go"). The "specificity in global directions" score reflects the percentage of the mothers global directions which contained verbalization of labels (either or both).

C) Post-response feedback.

Measures of post-response feedback were based on the mothers' behavior immediately after the placement responses of the children. This included corrective feedback after errors and re-affirmation of the sorting principle after correct placements. Starting with the moment at which the child first committed himself to a group, everything the mother said and did in relation to the block in question was taken into account in coding post-response teaching. Sometimes a block would be placed several times before the child finally made the correct choice, with the mother making statements before and after each intervening placement. All of this teaching behavior was considered as post-response, however, since it occurred after the original error and was triggered by the preceding actions of the child. The coding categories for post-response behavior parallel those for pre-response behavior:

1. Verbalization of labels after error. A given block could be placed incorrectly on either the height or the mark dimension (one error) or on both dimensions (two errors). The mothers' corrective feedback was scored for each block on which such errors occurred. To be credited with verbalizing the label, the mother had to give a substantive, descriptive label which indicated the nature of the error ("No, those are too small; put it with the other big ones."). Statements like "No, those don't look the same" or "That one goes over here" did not qualify.

2. Focusing after error. "Focusing" in post-response coding had the same meaning and was coded in the same way as in pre-response coding. This measure refers to the mothers' use of focusing behavior in correcting the child's placement errors. Mothers were credited with focusing for each correction in which they attempted to focus the child's attention upon the relevant block attributes while indicating the nature of the error.

3. Verbalization of labels after success. This measure parallels the measure of verbalization of labels after error, except that it applies to the blocks that the child placed correctly (according to both attributes). To receive credit here, the mothers had to verbalize the specific labels ("That's right, now they are all tall and have 'X'"), and not merely affirm the correctness of the response ("That's right").

4. Focusing after success. This last post-response behavior measure parallels the "focusing after error" measure, and refers to focusing behavior on the part of the mother in her feedback following correct responses by the child.

For all the measures of verbalization of labels, any synonyms for "height," "tall," " short," "mark," "X," and "O" were accepted, including the statement "they have the same top" as a variant to "they have the same mark." Statements such as "they look just the same" or "they look alike," however, were not credited for verbalization of labels.

Coding was done by the author and trained undergraduates. For all measures, coding was done twice and disagreements were resolved by discussion after re-examining the protocols. Inter-coder agreement for the measures of the mothers' presentation of the concepts of "height" and "mark" (placement on a 4-point scale) was 90% and 81%, respectively. Agreement concerning presence or absence of verbalization of labels in global directions occurred in 96% of the units. Agreement on the coding connected with the remaining measures (presence vs. absence of specificity of labels or of focusing behavior in pre-response instructions and post-response feedback) ranged from 91% to 97%.

Results

The results are summarized in Table 2, which contains means and standard deviations on the measures for the total group and for the four social status groups, and Table 3, which contains t-statistics reflecting the relative size and the degree of statistical significance of differences among the four SES groups. As expected, the degree of informational specificity in the mothers' communications varied both with social status and with degree

of situational press. Except for one non-significant reversal, the scores for the middle-class mothers exceeded those for the mothers in all three working class groups on each measure. The majority of the differences in favor of the middle-class mothers were statistically significant and many were of considerable magnitude. Differences among the three working class groups were smaller and less consistent, although the mothers in the upper-lower class group generally tended to do better than those in the two lower-lower class groups.

Variability in performance levels across situations can be seen in the means for the total sample and for the four SES groups (Table 2). For each pair of parallel measures which tapped the same behavior in different situations, differences in means conformed to expectations based on hypothesized situational press for informational specificity. The mothers were more specific when dealing with mark than when dealing with height, more specific in their post-response feedback than in their pre-response instructions, and more specific in correcting errors than in confirming correct responses.

Other aspects of the data are also consistent with the hypothesis that observed performance is produced by the interaction of individual differences in maternal specificity with variation in situational press for specificity. Intercorrelation among orientation period and post-response feedback measures are all positive and usually statistically significant (ranging from $r = .10$ to $r = .57$). Correlations involving the pre-response measures are less consistent, however, (ranging from $r = -.20$ through $r = .42$), apparently because of the low frequencies and high variabilities typical of these measures. Correlations are also higher within than across situations (orientation, pre-response instructions, or post-response feedback), and verbalization measures tend to correlate more highly with one another across situations than with focusing measures. All eleven measures were significantly correlated with criterion scores obtained from a test of the children's learning conducted after the mothers finished their teaching (Brophy, 1967).

In general, then, the data show meaningful individual differences in maternal communication of specific information, although performance levels fluctuate considerably across situations. The effects of interaction among these variables are observable in the group difference data in Table 3.

The largest, most obvious, and most consistent differences favoring the middle class over the working class mothers occur in the orientation period and pre-response instructions variables. These are performance situations where a premium was placed on proactive behavior by the mothers. The differences occur because the middle class mothers were the only group to consistently spend much time on initial orientation to the task, to make the relevant block attributes more salient in the child's perceptual field by helping him to focus his attention on them, or to give pre-response instructions which specified the response process by including the appropriate verbal labels. The performance of the middle-class mothers on these variables was far from perfect by ideal standards, by as a group they did tend to recognize the need for such behavior and to supply it at least some of the time. Many of the working class mothers, on the other hand, were at or below minimal standards in their performance on the orientation and pre-response instruction measures. The most typical procedure among these mothers was to attempt to show the child what to do with a quick demonstration and then to settle into a pattern of getting the child to respond and attempting to teach through corrective feedback. This worked in a few cases, but typically the orientation was too short and too vague, the pre-response instructions lacked sufficient delineation of response process, and the feedback, although relatively better, was not consistent and specific enough to overcome these other deficiencies and produce adequate learning.

Discussion

As had been hypothesized, specificity was found to vary jointly with the social status of the subjects and with factors of situational press. These findings have implications for our understanding of the nature of social class differences in parental behavior as well as for conceptualization of the nature of cultural disadvantage. At the purely empirical level, consideration of the interaction between social status differences and situational differences suggests that social status differences will be minimized in situations which circumscribe the possible range of parental behavior, while more pronounced SES differences should occur in situations where the parent

has more freedom in initiating and structuring the interaction. Although this point is rather obvious and somewhat mundane when considered by itself, it may be helpful in understanding the often confusing or contradictory findings of studies of parental behavior and socialization practices. The findings of the present study imply that greater social status differences will be found when the parental behavior being studied is stimulation or enrichment rather than correction or self-care training, when the activity is complex or abstract rather than concrete and simple, or when it involves the teaching of desired behavior rather than the suppression or elimination of undesired behavior. These considerations can conveniently be summarized in the statement that SES differences will be maximal in situations which require the mother to be proactive and will be minimized in situations which allow her to be reactive.

Until relatively recently, research in parental behavior has concentrated primarily on the affective and disciplinary domains (love-hostility and permissiveness-strictness), often in connection with such child variables as dependency and aggression. In effect, such studies were addressed primarily to reactive parental behavior. The frequently confusing and contradictory findings in research on social class differences in parental behavior and on the relationships between parent behavior and child behavior may be due in part to the fact that the types of parental behavior and the kinds of situations chosen for study may have restricted the range of behavior sampled to areas in which social class differences are likely to be relatively small, inconsistent, and insignificant. The recent interest in studying cognitive and verbal stimulation and other parental behavior relevant to the education and guidance aspects of socialization rather than the restrictive or disciplinary ones may yield greater payoff in view of the more proactive parental behavior involved. The shift of interest to such parental behavior also involves a shift of models from a study of bi-polar dimensions (love-hostility, strictness-permissiveness) to a model characterized by restriction and limitation versus differentiation and elaboration in parental behavior. This approach allows for comparison of the number and variety of techniques used by

different parents in facing the same situation as well as differences in parental proficiency in applying any given technique.

With regard to the question of social class differences in cognitive stimulation, the present findings are consistent with the argument that crucial differences are not in the sheer amount of stimulation, but in the way stimulation is organized in the home (McCandless, 1967), or the way in which the home environment fosters cue distinctiveness (Kagan, 1967). This same idea is implied, of course, in the theorizing of Hess and Shipman (1965) in their discussion of social class differences in terms of the degree to which mothers place the behavior of their children in a context of meaning. Their formulation is perhaps the most generally useful, since it applies to parental communications which delineate response process or give feedback in addition to activities which enhance cue distinctiveness.

The present data not only are consistent with the Hess-Shipman theoretical formulation; they are also consistent with the data upon which those formulations were based. They correlate in the expected direction with a wide range of measures on both mothers and children relevant to the socialization of educability. Conversely, the pattern of social status group differences in the Hess-Shipman study also tends to interact with situational press in the manner indicated in the present paper (at least for those measures for which the kind and amount of situational press thought to be operating can be reliably evaluated). A good example was the mothers' behavior on the "Etch-A-Sketch" task in which they copied figures with their children. Errors on this task were irrevocable, so that a much greater premium was placed on specificity in the pre-response instructions on each trial than was the case in the block-sorting task. Under these conditions, the pre-response instructions of the mothers in Group A were specific 70.2% of the time, while the respective figures for Groups B, C, and D were 44.4%, 35.4%, and 39.5%. These figures may be compared with the percentages for giving both labels in Table 2. The position of the groups relative to one another is similar in both sets of data, but the absolute level of performance in giving specificity in pre-response instructions was much higher in the "Etch-A-Sketch" task than in the block sorting task. This difference is apparently due to the greater press

for specificity inherent in the "Etch-A-Sketch" task. When the group differences were translated into standard error units and t-statistics were computed, it was found, as expected, that the superiority of Group A was relatively greater in the block sorting task where situational press was less intense.

In general, the data support the idea that class differences are maximized in measures of primarily proactive behavior and minimized in measures of primarily reactive behavior. Direct comparisions of absolute level of performance across situations frequently cannot be made, however, since normative or baseline data which would allow the placement of diverse behaviors on a common scale are often lacking. In the present study, for instance, comparisons between measures of pre-response instructions and post-response feedback were relatively easy to make, since both sets of measures were tied into the same unit of behavior--the individual block placement responses of the children. Direct comparisons of either pre-response instructions or post-response feedback with behavior during the orientation period cannot be made, however, since it was not possible to establish an unambiguous baseline or standard for completeness of orientation and orientation period measures could not be converted into percentages as was done with the other measures.

To generalize somewhat, the present study suggests that social class differences are greatest in the kinds of interactions and teaching opportunities in which parents give information or instructions to their children which are intended to prepare the child to respond appropriately in the future, or, in some cases, which do not require any particular overt response from the child. Historically, researchers in the areas of socialization and social class differences in parental behavior, in filtering their findings through a theoretical framework, have turned to conditioning and social learning theories with a strong reinforcement emphasis. This tendency has not been without merit, and this approach has and will continue to advance in the field. By the very nature of their kind of theorizing, however, researchers with this viewpoint tend to concern themselves primarily with parent-child interactions of the more reactive variety, as in the behavior

coded under "post-response feedback" in the present study. This emphasis needs supplementing, so that more attention is paid to variables of instructional processes which precede responses. Approaches such as those of Gagne (1965), Ausubel (1963), and Bruner (1966) are potentially very useful in socialization research, especially for understanding and clarifying social class differences. Their ideas seem most relevant to proactive behavior, such as pre-response orientation and instruction strategies of parents, which reinforcement theoriests usually do not investigate. A good example occurs in the study of cues and cue functions. Considerable recent research has accumulated which demonstrates the importance of cue distinctiveness or cue salience in fostering attention and learning (Trabasso and Bower, 1968), especially concept learning (Klausmeier, et. al., 1965). Much of this research has been concerned with the effects of physical stimulus properties in promoting cue distinctiveness, systematically varying such variables as the number of stimulus properties, the amount and salience of irrelevant properties, and the relative salience of the difference between cues that must be discriminated. Such studies regularly show that manipulation of the physical properties of stimuli will increase or decrease their cue distinctiveness or salience. It should be recognized that the orientation, pre-response instructions, and especially the focusing behavior of mothers in the present study also affected cue salience, although not by changing the physical properties of the stimuli. The mothers, by instilling a general set or expectation for the task as a whole, by telling the children what to look for and where to look for it, by providing distinctive labels which emphasized the unique identity of each separate type of block, and by calling attention to the contrast between distinctive examples, were enhancing the salience of the relevant properties of the stimuli in the perceptual field of the children. In other words, the relevant stimulus attributes acquired cue properties, although by the vehicle of verbal instruction accompanied by appropriate focusing behavior and not by a series of overt responses given feedback or reinforcement. As Ausubel (1963) has pointed out, this method is the most efficient when done properly.

It could be argued on the basis of the present results that the instructional method is the best for socialization purposes, since it is used more

by middle-class mothers who tend to be more successful in reaching socialization goals. Although such a hypothesis may well be correct, it would not be fair to say that the data of the present studies support it. The mothers whose teaching was confined primarily to post-response activities tended to be the least effective teachers generally, so that they were not acting with the sophistication or consistency that the conditioning or behavior modification theorist would require. A true test of the possible differences between methods would require groups of mothers who did not differ in their abilities to execute the behavior that the methods require. Regardless of what results might be obtained under these rather ideally structured conditions, however, it remains true that a major difference between middle-class and lower-class mothers is that the middle-class mothers use a greater repertoire of techniques, supplementing response-shaping behavior with pre-response activities, especially the types of verbal instruction recommended by Ausubel. This difference in variety of techniques exists in addition to differences in execution of commonly used techniques, although here the more advantaged mothers also tend to show more optimal levels of behavior. Hess and Shipman have obtained similar results (differences in type of behavior in addition to differences in level of behavior) in studying other aspects of parental socialization activities. All these differences tend to combine and accumulate in the same direction, so that their cumulative impact in many homes results in the situation we call "cultural disadvantage."

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TABLE 1. Age, sex, education and intelligence data for the four social status groups and for the total sample.

	GROUP A	GROUP B	GROUP C	GROUP D	TOTAL SAMPLE
Mean age of mothers (years)	31.8 (3.59)	29.5 (6.12)	31.1 (6.91)	30.7 (7.47)	30.8 (6.20)
Mean age of children (months)	49.3 (2.31)	50.5 (2.81)	49.6 (2.93)	48.9 (2.75)	49.5 (2.74)
Estimated WAIS verbal I.Q. (mothers)	109.9 (11.35)	95.1 (13.84)	84.8 (13.49)	83.9 (13.46)	93.4 (16.72)
Stanford-Binet I.Q. (children)	110.0 (14.79)	99.9 (15.51)	96.5 (10.75)	94.6 (10.14)	100.2 (14.16)
Mean years of academic schooling (mothers)	14.9 (1.55)	11.4 (0.94)	9.2 (1.56)	8.7 (1.61)	11.0 (2.86)
Number of boys	19	14	19	19	71
Number of girls	16	18	14	18	66
TOTAL	35	32	33	37	137

TABLE 2. Mean scores on maternal teaching measures for four social status groups and for the total sample.[1]

Measures	Group A (N = 35)	Group B (N = 32)	Group C (N = 33)	Group D (N = 37)	TOTAL (N = 137)
Orientation Period:					
Presentation of Mark	2.1 (0.43)	1.8 (0.75)	1.8 (0.93)	1.8 (0.55)	1.9 (0.69)
Presentation of Height	1.9 (0.90)	1.3 (0.85)	1.1 (0.89)	1.2 (0.83)	1.4 (0.91)
Duration of Orientation	2.3 (0.83)	1.5 (0.95)	1.4 (1.03)	1.3 (1.08)	1.6 (1.05)
Pre-Response Instructions:					
% Verbalizes Both Labels	27.2 (26.50)	14.1 (25.62)	10.7 (16.92)	8.2 (16.10)	15.1 (22.73)
% Verbalizes Any Label	39.5 (28.72)	22.1 (26.95)	22.3 (21.37)	20.1 (25.04)	26.1 (26.62)
% Focusing	15.3 (20.96)	4.7 (8.51)	5.5 (7.26)	6.4 (10.80)	8.1 (13.71)
% Verbalizes Labels in Global Directions	24.3 (30.36)	8.8 (20.32)	11.6 (21.42)	18.7 (24.19)	16.1 (24.98)
Post-Response Feedback:					
% Verbalizes Labels after Error	86.1 (22.01)	75.3 (28.66)	72.3 (30.06)	65.2 (26.56)	74.8 (27.66)
% Focusing after Error	36.9 (29.22)	33.0 (25.04)	29.9 (21.74)	40.8 (27.52)	35.3 (26.17)
% Verbalizes Labels after Success	41.5 (32.44)	40.2 (34.74)	30.7 (28.91)	24.8 (29.36)	34.0 (31.81)
% Focusing after Success	20.7 (28.74)	14.7 (24.76)	8.7 (16.19)	9.7 (19.15)	13.3 (22.83)

[1]Standard deviations appear below each mean value in parentheses.

TABLE 3. t-statistics from tests of differences among four social status groups in mean scores on maternal teaching measures.[1]

Measures	Group Comparisons					
Orientation Period:	A-B	A-C	A-D	B-C	B-D	C-D
Presentation of Mark	5.08	4.37	5.25	-0.07	-0.73	-0.57
Presentation of Height	5.65	7.04	6.32	1.48	0.38	-1.19
Duration of Orientation	7.79	8.19	8.75	0.61	1.18	0.55
Pre-Response Instructions:						
% Verbalizes Both Labels	4.11	6.24	7.62	1.30	2.38	1.25
% Verbalizes Any Label	5.12	5.64	6.13	-0.07	0.63	0.78
% Focusing	5.74	5.63	4.76	-0.78	-1.46	-0.87
% Verbalizes Labels in Global Directions	4.95	4.02	1.74	-1.08	-3.67	-2.59
Post-Response Feedback:						
% Verbalizes Labels after Error	3.47	4.30	7.09	0.80	2.94	2.02
% Focusing after Error	1.14	2.19	-1.15	1.05	-2.39	-3.56
% Verbalizes Labels after Success	0.31	2.84	4.48	2.42	3.99	1.69
% Focusing after Success	1.79	4.30	3.81	2.34	1.87	-0.47

[1] $p < .10$ when t = approx. $\pm$ 1.67; $p < .05$ when t = approx. $\pm$ 2.00; $p < .01$ when t = approx. $\pm$ 2.66; $p < .001$ when t = approx. $\pm$ 3.46 (all two-tailed tests).